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Conference Abstract

Assessing Herbarium Specimen Image Quality with FineFocus

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Abstract

The Mid-Atlantic Megalopolis Thematic Collections Network, a digitization project funded by the U.S. National Science Foundation, seeks to digitize ca. 800,000 herbarium specimens through imaging, transcription, and georeferencing. The use of autofocus alone in herbarium specimen imaging with a digital single-lens reflex camera does not yield consistently sharp images, even with relatively two-dimensional specimens and a proper selection of focus point. The FineFocus technique provides a way of assessing contrast, as a proxy for focus quality, through analysis of a standard text target using two freeware programs run through a batch script. By calculating a numeric value, this protocol provides an objective way to obtain a high level of focus quality for a specific imaging rig with given conditions before proceeding with imaging. Adjusting focus with FineFocus yields noticeably sharper images, allowing users to see fine details otherwise obscured by poor focus, such as secondary venation. This technique can be easily implemented in herbarium digitization workflows to improve the quality of specimen images.

Keywords

digitization, herbarium, imaging

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